CLAIMS

What is claimed is:

1. A method of forming an anastomosis between a graft vessel and a target vessel, each vessel having a lumen therein and a wall around the lumen; the method comprising:

providing an anastomosis device;

connecting an end of the graft vessel to said anastomosis device;

delivering at least a portion of the anastomosis device into the lumen of the target vessel through an opening in the wall of the target vessel; and

manipulating said anastomosis device to form a first flange therein, said first flange positioned in the lumen of the target vessel and spaced apart from the wall of the target vessel.

2. The method of claim 1, wherein said connecting comprises everting an end of the graft vessel onto an end of said anastomosis device.

3. The method of claim 1, wherein said manipulating includes radially expanding at least a portion of said anastomosis device.

4. The method of claim 1, further comprising providing an expander; wherein said manipulating includes translating said expander relative to said anastomosis device.

5. The method of claim 1, further comprising moving said first flange into contact with the wall of the target vessel.

6. The method of claim 5, wherein said moving is substantially in the proximal direction.

7. The method of claim 5, wherein said moving is substantially linear.

8. The method of claim 5, further comprising

providing a holder; and

connecting said anastomosis device to said holder, wherein at least a portion of said anastomosis device is separable from said holder.

9. The method of claim 8, wherein said moving is performed by moving said holder.

10. The method of claim 8, further comprising separating at least a portion of said anastomosis device from said holder after moving.

11. The method of claim 8, wherein said anastomosis device includes at least one tab at its proximal end, and wherein said connecting includes connecting at least one said tab to said holder.

12. The method of claim 5, further comprising manipulating said anastomosis device to form a second flange proximal to said first flange and positioned outside the target vessel.

13. The method of claim 12, wherein said second flange is at least partially in contact with the wall of the target vessel.

14. The method of claim 1, wherein said anastomosis device is at least partially tubular.

15. The method of claim 1, wherein said manipulating includes plastically deforming at least a portion of said anastomosis device.

16. The method of claim 1, wherein said anastomosis device is composed of stainless steel.

17. The method of claim 1, wherein said first flange includes a plurality of elements spaced apart from one another at their distal ends.

18. The method of claim 17, wherein said elements are arranged substantially radially symmetrically about the longitudinal axis of the anastomosis device.

19. The method of claim 17, wherein said connecting includes penetrating the graft vessel with at least one said element.

20. The method of claim 17, wherein said manipulating includes moving at least a portion of at least one said element away from at least a portion of a different said element.

21. The method of claim 1, wherein said anastomosis device is unitary.